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09/467,569	12/20/1999	RAJESH SUNDARAM	6487/54045	2549

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EXAMINER	
SCHNEIDER, JOSHUA D	

ART UNIT	PAPER NUMBER
2182	16

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/467,569	SUNDARAM ET AL.	
	Examiner	Art Unit	
	Joshua D Schneider	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,21-26 and 28-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,21-26 and 28-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/20/2004 have been fully considered but they are not persuasive. The three arguments set forth by the applicant are: (1) that the AAPA notification system is ambiguous in nature and does not provide information in real time; (2) that the Kampe reference teaches the mapping system messages to easy to understand icons during the initialization of a computer and is also not in real time; and (3) that the Wilson reference does not teach the changing of anything internal to the computer. These arguments are found to be spurious and not persuasive.

2. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

3. With regards to the arguments the AAPA notification system is ambiguous in nature and does not provide information in real time, and that the examiner has completely failed to show these issues were known in the prior art. This assertion ~~has~~ is not in any way persuasive. While the AAPA was used to show certain limitations were admitted to be well known, in no way was the suggestion of the problems to be solved derived solely from the applicant's disclosure. The use of motivations from the references combined with the AAPA clearly shows that the problems

of slow and ambiguous notification systems were notoriously well known in the art, and that solutions to these problems were also well known.

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, all motivation statements originated from the Kampe, Wilson and Levy references.

5. In response to applicant's argument that the references are directed to different inventions and situations which have no relationship to each other, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In each of the references cited, the teachings pointed to are not directed to the claimed inventions of the references, but rather to elements of the inventions related to one common theme, quickly and clearly displaying information to a user. It is clear throughout these references that presenting information to a user is applicable to a wide variety of applications.

6. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

7. The applicant is reminded to look not at what the references claim as an invention, but at the teachings of the references as a whole. This may help clarify that the teaching of presenting clear and unambiguous progress icons during system configuration by Kampe is indeed applicable to teach that it was notoriously well known to show progress to subsystem configurations clearly and unambiguously. The main teaching of this reference is not to prevent problems, but to keep the user clearly informed about what is occurring in the system. In light of the specification, keeping the user informed through the use of icons indicating status of the system is the only way the applicant can claim to "prevent" problems from occurring. As for the other limitations which applicant states are not present, it is obviously not presumed that any of the references have all of the claimed limitations, of the rejection would not be under 35 U.S.C. 103(a) which forms the basis for all obviousness rejections. It is recognized that Kampe both acknowledges and solves the problem of cryptic icons that may have no meaning to a user. Further the argument both Kampe and the AAPA fail to recognize instability created by the connecting devices to a computer is preposterous. The AAPA clearly teaches on page 3, lines 3-6, that prior art systems changed the cursor icon to prevent user computer action during the configuration process. It is inherent to this change which takes place during the plugging or unplugging of a USB device, and lasts only the duration of the configuration process, that this notification is intended to signal to the user that a system process during which the user will be prevented from further action. Simply because the applicant believes it can solve the problem of user notification better does not mean that the problem has never been addressed. The AAPA is

clear that Windows® has addressed this problem, and therefore recognized it, though not to the extent that the applicant may believe is necessary.

8. Similarly, the applicant is reminded to look at the Wilson reference in the same light. This may help clarify that the teaching of presenting updates during system status changes by Wilson is indeed applicable to teach that it was notoriously well known to show progress to subsystem status changes in real time. The main teaching of this reference is not to prevent problems, but to present the user real time information about what is occurring in the system. In light of the specification, it is assumed that the applicant believes that it would not be obvious to present user status information in real time. It is recognized that Wilson teaches that it was notoriously well known in the art at the time of invention to provide real-time information to the user about system status. Further, the argument Wilson fails to teach a dynamically reconfigurable operating system is irrelevant. The AAPA clearly teaches this type of system, as does any well-known system that uses the USB. Finally the argument that the devices of Wilson are all external is spurious and not persuasive. The devices of a USB port would also be external. The control of the connection of these devices is internal and, as admitted by the applicant on the top of page 14 of the arguments, does involve the connecting and disconnecting of devices. It is impossible to see how a program, which allows the user to safely connect and disconnect devices, is "not he least bit concerned with problems associated with plugging and unplugging devices." The lack of mentioning certain functions of the reconfiguration process is irrelevant, as these functions were notoriously well known, and are taught by the AAPA.

9. The arguments to the lack of motivational statements are unfounded and therefore not persuasive. The applicant continues to argue that various insignificant differences, not relied

upon for the rejection, in the operation of the systems somehow invalidate the motivational statements for combining various notoriously well known teachings. With regards to the Kampe reference, the teaching that it is certainly within the ability of one of ordinary skill in the art to change a message or icon that is found by the applicant to be ambiguous, can be altered to show a message or icon that is clear and informative of system status, is clearly recognized and shown to be highly desirable. The Wilson reference is similarly well motivated. The applicant has repeatedly stated that because the systems and their associated messages are different, they cannot be combined properly. This argument goes against the teachings of the specification that repeatedly states that many different modern day systems are within the scope of the teachings about message handling system. This is also true with regards to the teachings that a variety of bus types or differing electronic systems. The statement that Kampe cannot be combined because of the speed differences is refuted by the specifications statement that the time is entirely dependent on the speed the system being used (page 14, line 1).

10. With regards claim 3, applicant's assertion that three distinct indicators does not have any basis as there is no such limitation in any claim. Furthermore the continuous status updating of Kampe provides clear indication of more than three distinct indicators of progress, including beginning, middle, and ending points.

11. With regards to claims 4, 5, 9, and 10, the disclosed system relates to the combination in the rejections upon which these claims depend, namely the combined system of the AAPA, Wilson, and Kampe. This was stated later in the same rejection and has been corrected to say so at both occurrences in the rejection. The applicant is encouraged to call the examiner other points are unclear.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1-13, 15-16, 18-20, 24, and 27-29, are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA) in further view of U.S. Patent 5,953,010 to Kampe et al. and U.S. Patent 5,386,360 to Wilson et al. With regards to claims 1, 7, 11-13, and 28, the AAPA teaches several features of the computer to be common, including the system having a visual display (page 1, line 23), an exterior serial bus port that is very commonly a USB port (page 1, line 21), and an operating system that monitors the USB plug and play bus topology and that control access to the USB (page 1, line 28-29). The AAPA further teaches that the operating system creates a visual display whenever a USB device is plugged or unplugged (page 3, line 4-6), and that this is accomplished because the operating system has some message handling capabilities (Figure 11 A&B), which distribute messages to the appropriate applications. This includes taking the depiction of the mouse cursor and changing it from a first state to an hourglass icon in order to inform the user that the system is busy (page 3, lines 4-6), and then back to the cursor symbol when the system is again ready for use. The applicant states that the changing of the cursor from a first state, to a second state, and then to a third state, fails to intelligibly show the user what process is taking place, and is also to slow to prevent user actions which may impair the system. The AAPA fails to describe the known operating system generating the configuration messages and the descriptive notification to the user that

configuration is in progress and completed. The Kampe et al. reference details the notification of user through a computer resident program that creates displays to update the status of events (column 7, lines 51-63). Kampe teaches the interception of unintelligible internal text status messages, before they can be displayed (column 6, lines 38-42 and 62-66). These messages are inherently internal, as they are not displayed. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the notification system of Kampe et al. with notification and USB plug and play of the AAPA, in order to create a system that will clearly notify the user promptly of the progress of a configuration process, or problems with the configuration of the computer I/O system.

14. Both the AAPA and Kampe fail to teach the visual display for notifying the user in real time. However, Wilson teaches that it was well known to update icons in real time to give the user current information regarding the status of I/O devices (column 9, lines 44-49). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the notification system of Kampe et al. and the real time icon updates of Wilson with notification of the AAPA, in order to create a system that will notify the user promptly of the progress of a current status of the computer I/O system.

15. With regards to claim 2, the AAPA teaches that it is common in the art to have a computer system that uses message handling to send messages to applications (Figure 11), and that these applications include a mouse controller that creates visual representations of the user movements. The AAPA further describes that the messages include changing the appearance of the cursor to indicate that the system is busy and that it is again available for normal use. There is no specific mentioning of the operation of the message handling system, or the state

determination unit. The Kampe et al. reference covers these details more specifically and also includes more rigorous discussion of the display and processing. The Kampe et al. reference teaches the hooking and receiving of the messages, and determines what type the message it is (column 7, lines 11-13).

16. With regards to claims 3, 7, 8, 11-13, and 27-29, Kampe teaches these messages to include the beginning, milestone, and completion of event status updates (column 7, lines 55-63), and displays are generated for each of these messages to notify the user of the current status. Kampe teaches that the display may also include a progress indicator and a text legend (column 4, lines 54-64). The plugging in, beginning of the configuration process, and completion of the configuration process are examples of milestone events. It would have been obvious to one of ordinary skill in the art at the time of invention, to combine the AAPA and Wilson with Kampe to create a system and method which notifies the user when a change in the computer topology is detected, a reconfiguration is starting, taking place, and finished, so that the user is updated as to current state of the processing taking place.

17. With regards to claims 4, 5, 9, and 10, the applicant admits that it is common in the art to use the USB standard port as the serial bus port (page 1, lines 18-19). It would have been obvious to one of ordinary skill in the art at the time of invention, to use a USB port with the disclosed system to take advantage of the plug and play features of the USB standard. With further regards to claim 5, 9, and 10, the applicant admitted prior art discloses that compound hubs (Figure 4) such as the Fujitsu Universal LAN Hub® (Figure 5) are known, they can be used to replicate the function of a mouse port, a serial port, a printer port, and a keyboard port, and that they can be connected to the computer case through a universal serial bus port via a serial

cable. It would have been obvious to one of ordinary skill in the art at the time of invention, to use a compound hub with the combined system of the AAPA, Wilson, and Kampe, for the replication of peripheral device ports to reduce the number of connections to the computer case.

18. With regards to claims 6 and 24, combined system of the applicant admitted prior art and Kampe et al. fails to teach the inclusion of an audio signal indicative of the status of the configuration. However, it was well known in the art at the time of invention that audio signals and audio output ports are used in conjunction with the operating system and other applications as a method of getting the attention of the user through a speaker. Wilson teaches the use of an audio signal, a beep, to alert the user to real time icon changes (column 9, lines 44-49). It is inherent that this beep is made through a speaker or other audio output device. It would have been obvious to one of ordinary skill in the art at the time of invention, to use the combined system of the AAPA and Kampe et al. with an audio output port, an audio signal indicative of the status of the configuration, and a speaker of Wilson, in order to better alert the user to changes in the configuration process.

19. With regards to claims 15, 16, and 18, Kampe teaches messages to include the beginning, milestone, and completion of event status updates (column 7, lines 55-63), and displays are generated for each of these messages to notify the user of the current status. Kampe teaches that the display may also include a progress indicator and a text legend (column 4, lines 54-64).

20. With regards to claims 19 and 20, Wilson teaches the updating of icons in real time (column 9, lines 44-49).

21. Claims 14, 17, 21-23, 25, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (AAPA), U.S. Patent 5,953,010 to Kampe et al.,

and U.S. Patent 5,386,360 to Wilson et al. as applied to claims 1-13, 15-16, 18-20, 24, and 27-29 above, and further in view of U.S. Patent 6,466,981 to Levy.

22. With regards to claims 14, 17, 21- 23, 25, 26, and 30, Kampe, Wilson and the AAPA are silent with regards to the use of graphical user interfaces (GUIs) including an icon resident in a system tray. However, Levy teaches that it was well known at the time of invention to use icons in a system tray to provide notification the user of system information (column 10, lines 18-20). Levy also teaches the changing of color to indicate differing states. It would have been obvious to one of ordinary skill in the art at the time of invention to use the well-known system tray icon of Levy with the combined system of the AAPA, Kampe, and Wilson, in order to provide clear user notification of system messages.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,286,066 to Hayes et al. teaches the use of indicators for hot plugged devices. U.S. Patent 6,389,560 to Chew teaches the display of status information relating to USB devices. U.S. Patent 5,958,020 to Evoy et al. teaches the real-time determination of events on USB systems. U.S. Patent 6,473,811 to Onsen teaches display of USB connection information.

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D Schneider whose telephone number is (703) 305-7991. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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